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| <b>FORM PTO-1449</b><br><b>LIST OF PATENTS AND OTHER ITEMS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT</b><br>(Use several sheets if necessary) | <b>ATTY. DOCKET NO.</b><br>254/255             | <b>SERIAL NO.</b><br>09/687,759 |
|  | <b>APPLICANT:</b><br>REINITZ, Dr. Ilene et al. |                                 |
|  | <b>FILING DATE:</b><br>October 12, 2000        | <b>GROUP:</b><br>2161           |

| U.S. PATENT DOCUMENTS |  |                    |      |                           |       |              |                |
|-----------------------|--|--------------------|------|---------------------------|-------|--------------|----------------|
| EXAMINER<br>INITIAL   |  | DOCUMENT<br>NUMBER | DATE | NAME                      | CLASS | SUB<br>CLASS | FILING<br>DATE |
| AA                    |  | 09/505,981         |      | DEJONG, Peter et al.      |       |              | 02/16/2000     |
| AB                    |  | 09/687,659         |      | REINITZ, Dr. Ilene et al. |       |              | 10/12/2000     |
|                       |  |                    |      |                           |       |              |                |

| FOREIGN PATENT DOCUMENTS |  |                    |      |         |       |              |                       |
|--------------------------|--|--------------------|------|---------|-------|--------------|-----------------------|
| EXAMINER<br>INITIAL      |  | DOCUMENT<br>NUMBER | DATE | COUNTRY | CLASS | SUB<br>CLASS | TRANSLATION<br>YES NO |
|                          |  |                    |      |         |       |              |                       |

| OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.) |  |  |
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| <b>EXAMINER:</b><br>Not yet assigned <i>Daniel L. Greene</i>   | <b>DATE CONSIDERED:</b> <i>8/29/05</i> |
| EXAMINER: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include a copy of this form with next communication to applicant |  |

LIST OF PATENTS AND OTHER ITEMS FOR APPLICANT'S  
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APPLICANT:

REINITZ, Dr. Ilene et al.

FILING DATE:

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(Use several sheets if necessary)

## U.S. PATENT DOCUMENTS

| EXAMINER<br>INITIAL |    | DOCUMENT<br>NUMBER | DATE       | NAME             | CLASS | SUB<br>CLASS | FILING<br>DATE |
|---------------------|----|--------------------|------------|------------------|-------|--------------|----------------|
|                     | AA | 3,947,120          | 03/30/1976 | Bar-Issac et al. | 356   | 30           | 10/02/1974     |
|                     | AB | 4,266,871          | 05/12/1981 | Ritzi            | 356   | 30           | 07/28/1978     |
|                     | AC | 09/687,659         |            | Hemphill et al.  |       |              | 10/12/2000     |

## FOREIGN PATENT DOCUMENTS

| EXAMINER<br>INITIAL |    | DOCUMENT<br>NUMBER | DATE | COUNTRY | CLASS | SUB<br>CLASS | TRANSLATION<br>YES NO |
|---------------------|----|--------------------|------|---------|-------|--------------|-----------------------|
|                     | AD | 43465              | 1976 | Israel  |       |              |                       |

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

|  |    |   |
|--|----|---|
|  | AE | Hemphill T.S., Reinitz I.M., Johnson M.L., Shigley J.E. ( Fall 1998) Modeling the appearance of the round brilliant cut diamond: An analysis of brilliance. <i>Gems &amp; Gemology</i> , Vol. 34, No. 3, pp. 158-183.           |
|  | AF | Manson D.V. (1991) Proportion considerations in round brilliant diamonds (abstract), A.S. Keller, Ed., <i>Facing the Future - Proceedings of the International Gemological Symposium</i> , 20-24 June 1991, Los Angeles, p. 60. |
|  | AG | Suzuki S. (1970) A new design for brilliance plus dispersion. <i>Australian Gemmologist</i> , Vol. 10, No. 10, pp. 13-24  |
|  | AH | Harding B.L. (1975) Faceting limits. <i>Gems &amp; Gemology</i> , Vol. 15, No. 3, pp. 78-87.  |
|  | AI | Dodson J.S. (1978) A statistical assessment of brilliance and fire for polishing gem diamond on the basis of beometrical optics. Ph.D. Thesis, University of London   |
|  | AJ | Dodson J.S. (1979) The statistical brilliance, sparkliness and fire of the round brilliant-cut diamond. <i>Diamond Research</i> , 1979, pp. 13-17   |
|  | AK | Tognoni C. (1990) An automatic procedure for computing the optimum cut proportions of gems. <i>La Gemmologia</i> , Vol. 15, No. 3-4, pp. 23-32  |
|  | AL | Kato M. (1982) Re-Examination of Optimum Cutting Angles Between Main Facets of Gemstones Based on Geometrical Optics. <i>Journal of the Gemmological Society of Japan</i> , Vol. 9, No. 1, 3-17, pp. 127-142.                   |
|  | AM | Kato M. (1991) Evaluation of brilliancy in relation to various combinations of the main facet angles. <i>Journal of the Gemmological Society of Japan</i> , Vol. 16, No. 1-2, pp. 15-23 (and English translation).              |
|  | AN | Astric B., Merigoux H., Zecchini P. (1991) Etude theorique de l'aspect d'un diamant taille brilliant en fonction de ses parametres de taille. <i>Revue de Gemmologie a.f.g.</i> , No. 107, pp. 17-23 (and English translation). |

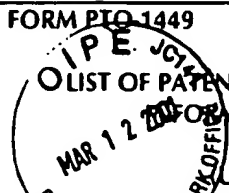
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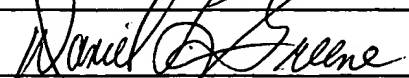
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|  | <b>APPLICANT:</b><br>REINITZ, Dr. Ilene et al. |                                 |
|  | <b>FILING DATE:</b><br>October 12, 2000        | <b>GROUP:</b><br>2161           |
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| AO | Astrie B., Merigoux H., Zecchini P. (1992) Etude de la variation de l'aspect de pierres taillées a l'aide d'image de synthese. <i>La Gemmologia</i> , Vol. 17, No. 1, pp. 7-31 (and English translation).  |
| AP | Internet ( <a href="http://www.rockhounds.com/rockshop/gem_designs/gemcad.html">http://www.rockhounds.com/rockshop/gem_designs/gemcad.html</a> ) GemCad, a computer program for modeling the appearance of faceted gemstones that has been available for several years (Product Review: GemCad 4.0: Rowland J., Originally Published in the Garnet Gazette March 1994)   |
| AQ | Internet ( <a href="http://www.gemology.ru:8101/octonus">http://www.gemology.ru:8101/octonus</a> ) Octonus, a company at Moscow State University formed in 1991, that is involved with conducting research on the computer modeling of diamond appearance. This company sells a commercial computer program for light tracing in polished diamonds. They also present results of their research work on diamond appearance on this web site. Inventor first met representative of this group in June 1999. |
| AR | Internet ( <a href="http://www.thunder.prohosting.com/~ultratec/ray.html">http://www.thunder.prohosting.com/~ultratec/ray.html</a> ) GEMRAY, Davis Designs, Strickland R. (last updated August 8, 1999).   |
| AS | Walters G. (December 1996) Cut Grading: Do the Numbers Add Up? Rapaport Diamond Report, Vol. 19, No. 45, pp. 49-50.  |
| AT | Gilbertson A., Walters G. (January 1997) What Tolowsky Really Said. Rapaport Diamond Report, Vol. 20, No. 2, pp. 35-37.  |
| AU | Gilbertson A., Walters G. (February 1997) The Measure of Beauty, Rapaport Diamond Report, Vol. 20, No. 6, pp. 43-46.   |
| AV | Gilbertson A. (Fall 1999) The Revolution in Cut Grading, <i>Gems &amp; Gemology</i> , page 157.  |
| AW | Gilbertson A., Walters G., Mcleod K., Wildman M. (1998), Letting Light Speak for Itself, <i>Advancements in the Science of Cut Analysis</i> , Diamond Profile Laboratory.  |
| AX | Lakowski R. (July 1977) C24 Diamond Colour Grading: A Comparative Evaluation, Color 77, Invited Lectures and Extended Abstracts of the Papers to be Presented at the Third Congress of the International Colour Association, Rensselaer Polytechnic Institute, Troy, New York, pp. 473-477.  |
| AY | Dodson J.S. (April 1978) A Statistical Assessment of Brilliance and Fire for the Round Brilliant Cut Diamond, <i>Optica Acta</i> , Vol. 25, No. 8, pp. 681-692.  |
| AZ | Dodson J.S. (April 1978) The Brilliance, Sparkliness And Fire Of Some Modifications To The Round Brilliant Cut Diamond Style, <i>Optica Acta</i> , Vol. 25, No. 8, pp. 693-699.  |
| BA | Dodson J.S. (April 1978) The Brilliance, Sparkliness And Fire Of Several Diamond Simulants, <i>Optica Acta</i> , Vol. 25, No. 8, pp. 701-705.  |
| BB | Stern N. (1975) Computer Ray Tracing in Faceted Gemstones. Master of Science Thesis, Feinberg Graduate School of The Weizmann Institute of Science.  |
| BC | Kirkpatrick D. G., Walsh J. P. (June 1985) The Geometry of Beam Tracing, <i>ACM Proceedings of The Symposium on Computer Geometry</i> , pp. 55-61.   |
| BD | Hanrahan R. (May 1986) Using Caching and Breadth-First Search to Speed Up Ray-Tracing (extended abstract), <i>Proceeding of Graphics Interface '86 and Vision Interface '86</i> , pp. 56-61.   |

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| <b>EXAMINER:</b><br>Not yet assigned   | <b>DATE CONSIDERED:</b> 8/29/05 |
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(Use several sheets if necessary)

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| BE | Ghazanfarpour D. (February 1992) Visualisation Realiste Par Lancer De Pyramides et Subdivision Adaptative, Proceedings of the 11 <sup>th</sup> International Conference of the CAD/CAM, Computer Graphics and Computer Aided Technologies, pp 167-180 (and English translation). |
| BF | Devillers O. (September 1989) Tool to Study the Efficiency of Space Subdivision Structures for Ray Tracing, pp. 467-481.   |
| BG | Getto P. (1989) Fast Ray Tracing of Unevaluated Constructive Solid Geometry Models, Proceedings of GC International' 89, Springer-Verlag, pp. 563-578.   |
| BH | Glassner A. S. (October 1984) Space Subdivision for Fast Ray Tracing, IEEE Journal of Computer Graphics and Applications, Vol. 4, No. 10, pp. 15-22.   |
| BI | Heckbert P.S., Hanrahan P. (July 1984) Beam Tracing Polygonal Objects, Computer Graphics - Proceedings of 1984 SIGGRAPH, Vol. 18, No. 3, pp. 119-127.  |
| BJ | Ohta M., Mackawa M. (1990) Ray-Bound Tracing for Perfect and Efficient Anti-Aliasing, The Visual Computer, International Journal of Computer Graphics, Vol. 6, No. 3, pp. 125-133.   |
| BK | Picott K. P. (March 1992) Extension of the Linear and Area Lighting Models, The IEEE Journal of Computer Graphics and Applications, Vol. 12, No. 2, pp. 31-38.   |
| BL | Musgrave F. K. (Sept. 1987) A Realistic Model of Refraction for Computer Graphics, Master of Science in Computer and Information Sciences Thesis, UCSC-CRL-88-11   |
| BM | Arvo J., Kirk D. (July 1987) Fast Ray Tracing by Ray Classification, Computer Graphics - Proceedings of 1987 SIGGRAPH, Vol. 21, No. 4, pp. 55-64.  |
| BN | Shoaff W., Recursive Ray Tracing, 01/12/2000, <a href="http://www.cs.fit.edu/wds/classes/adv-graphics/raytrace/raytrace.html">http://www.cs.fit.edu/wds/classes/adv-graphics/raytrace/raytrace.html</a>  |
| BO | Yuan Y., Kunii T. L., Inamoto N., Sun L. (1988) GemstoneFire: Adaptive Dispersive Ray Tracing of Polyhedrons, The Visual Computer, International Journal of Computer Graphics, Vol. 4, No. 5, pp. 259-270.   |
| BP | Cleary J. G., Wyvill G. (1988) Analysis of An Algorithm for Fast Ray Tracing Using Uniform Space Subdivision, The Visual Computer, International Journal of Computer Graphics, Vol. 4, No. 2, pp. 65-83.   |
| BQ | Bauer M. (1968) Precious Stones, Dover Publications Inc.   |
| BR | Nelson J. B. (July 1989) The Four Optical Attributes of a Diamond, The Journal of Gemmology, Vol. 21, No. 7, pp. 434-447   |
| BS | Wade F.B., Diamonds - A Study of the Factors that Govern Their Value, G. P. Putnam's Sons, The Knickerbocker Press, pp. 52-81  |
| BT | Whitlock H. P. (Feb. 7, 1917) The Evolution of the Brilliant Cut Diamond, The Jewelers' Circular, Vol. LXXIV, No. 1, pp. 115-121   |
| BU | Dake H. C. (Jan. 1953) Proportions for the Brilliant Cut, The Gemmologist, Vol. XXII, No. 258, pp. 17-18   |
| BV | Inoue K., Quantification and Visualization of Diamond Brilliancy, Journ. Gemmol. Soc., Japan, Vol. 20, pp. 153-167   |
| BW | Lawrence J. (March/April 1997) Slow Gear for New Technology, Diamond International, No. 46, pp. 57-63  |
| BX | Kato M. (1987) Elucidation of the Scintillation, Journal of the Gemmological Society of Japan, Vol. 12, No. 1-4, pp. 12-19   |


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Not yet assigned

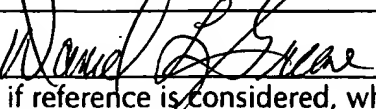
DATE CONSIDERED:

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| DBS | BY | Toriwaki J., Yokoi S. (1987) Rendering Gems by Computer Graphics, Journal of The Gemmological Society of Japan, Vol. 12, No. 1-4, pp. 3-11  |
|     | BZ | Rogers D. F., Procedural Elements for Computer Graphics, 2 <sup>nd</sup> Edition, WCB McGraw-Hill 1998, Table of Contents and Chapters 4-5.   |
|     | CA | Woo M., Neider J., Davis T., OpenGL Programming Guide, 2nd Edition, Addison-Wesley Developers Press 1997, Tables of Contents and Chapters 2, 5, and 7.                                    |
|     | CB | Foley J. D., Dam A. V., Feiner S. K., Hughes J. F., Computer Graphics - Principles and Practices, 2 <sup>nd</sup> Edition, Addison-Wesley 1990, Table of Contents and Chapters 13, 15-16. |
|     | CC | Hall R., Illumination and Color in Computer Generated Imagery, Springer-Verlag, New York 1989, Tables of Contents, Chapters 2-4, and Appendix I.  |
| DBS | CD | Long R., Steele N. (1984) <i>Facet Design</i> . Seattle Faceting Books, Mercer Island, WA.  |
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|  |  | FILING DATE:<br>October 12, 2000     | GROUP:<br>N/A            |

FOREIGN PATENT DOCUMENTS

| EXAMINER<br>INITIAL |  | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB<br>CLASS | TRANSLATION<br>YES NO |  |
|---------------------|--|-----------------|------|---------|-------|--------------|-----------------------|--|
| AA                  |  | 5-79993         |      | Japan   |       |              |                       |  |
| AB                  |  | 7-333158        |      | Japan   |       |              |                       |  |
| AC                  |  | 9-273994        |      | Japan   |       |              |                       |  |
| AD                  |  | 11-255511       |      | Japan   |       |              |                       |  |
| AE                  |  | 57-204440       |      | Japan   |       |              |                       |  |
| AF                  |  | 58-728          |      | Japan   |       |              |                       |  |
| AG                  |  | 58-38843        |      | Japan   |       |              |                       |  |
| AH                  |  | 58-92920        |      | Japan   |       |              |                       |  |
| AI                  |  | DE 3600115 A1   |      | Germany |       |              |                       |  |

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